



App Objects

GRIP ON SOL

2024-04-16

Contents

1	App Objects.....	3
2	App Object Set	3
2.1	New Set.....	3
2.2	Set Environments	4
2.3	Used Templates	4
2.4	Hide/Show Deployment Details	5
3	Create, Edit, Deploy	6
4	Create Database.....	7
4.1	QGrip-UI: Create Databases	7
5	Create Logins.....	9
5.1	QGrip-UI: Create Logins.....	10
5.2	QGrip-UI: Edit Logins	11
5.3	QGrip-UI: Check on AD	12
6	Create: What if Exists.....	14
7	Drop Database	15
7.1	QGrip-UI: Drop Databases	15
8	Drop Logins (and/or Database Users).....	17
8.1	QGrip-UI: Drop Logins (and/or Database Users)	17
9	Drop Roles & Members.....	19
9.1	QGrip-UI: Drop Roles & Members.....	19

1 App Objects

- **Databases**
- **Logins**
 - **Database Users**
 - **Database Roles (Members)**
 - **Server Roles Members**



App Object is a generic name for Databases and Logins. The Logins also covers their Database Users, Database Roles, Database Roles Members and Server Roles Members.

2 App Object Set

Create

- **Database**
- **Logins**

Drop

- **Databases**
- **Logins**
- **Roles + Members**

Creating and dropping App Objects in QGrip might be confusing at first but it is very efficient and quick if your Template Database, Database Roles and Logins have been defined properly.

Logins

Create: Logins+DB Users+DB Roles

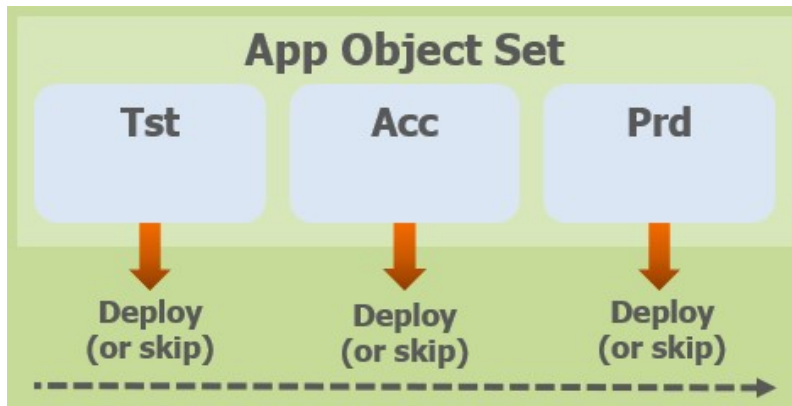
Drop: Logins+DB Users

Creating Logins will implicitly also create the Database Users and Database Roles. Dropping Database Users is included in the Set dropping logins.

Remember that the App Object Sets are meant for creating mainstream databases/logins. Creating exceptional objects can better be done outside of QGrip.

All objects created using QGrip will automatically be linked to the Application.

2.1 New Set



When an App Object Set is created, it is always created for all Environments of the Application. The philosophy is that the 'Dev->Tst->Acc->Prd' principle should be followed and QGrip encourages it.

2.2 Set Environments



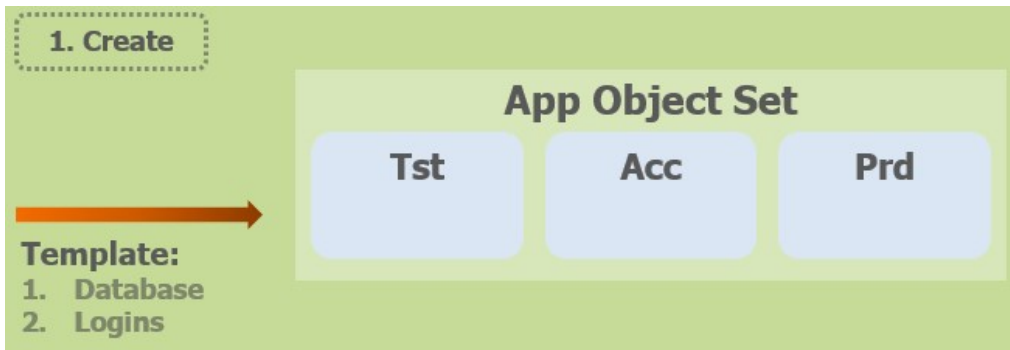
When a new Set is initiated, QGrip uses different sources for determining the Applications environments.

Environments and Default DB Hosts						
Environment	Domain	Type	Name	Inherited	From	
Acceptance	AD	Instance	VMSQL1201\ACC	<input checked="" type="checkbox"/>	Unit	
Production	AD	Listener	AG_LIST_01	<input type="checkbox"/>		

Creating new objects will always be on the 'Environments and Default DB Hosts' defined for the Application.

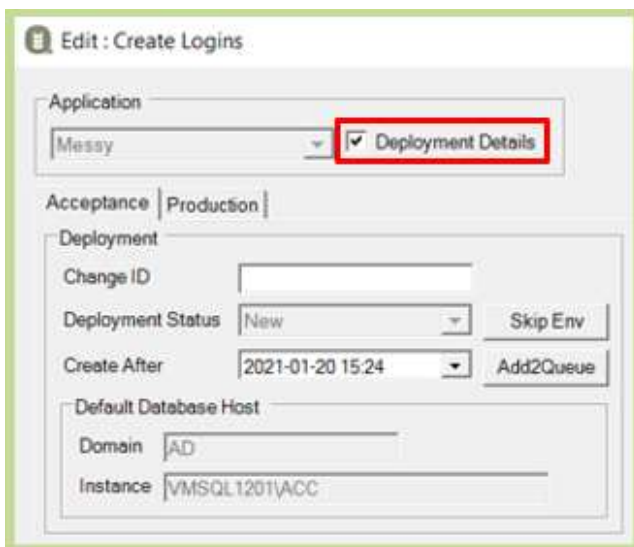
When a new Set for Drop is initiated, the Environments of all objects linked to the Application in the CMDB are used.

2.3 Used Templates



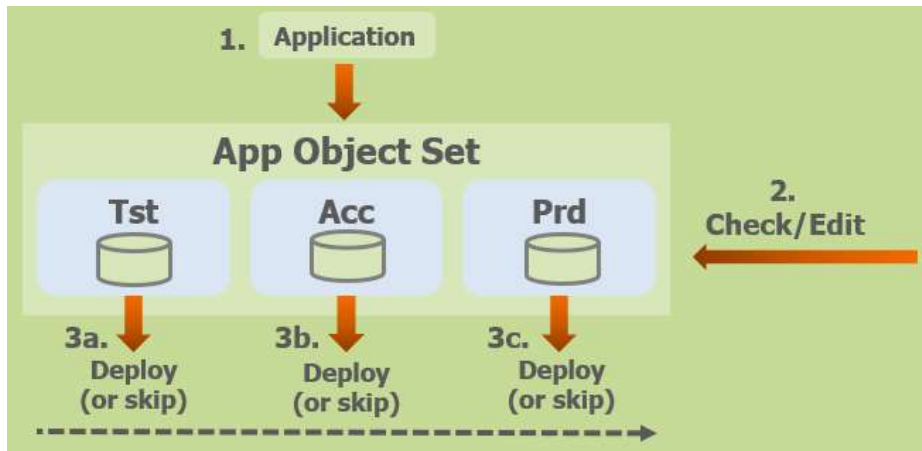
When Creating Databases and Logins, the defined templates will be used.

2.4 Hide/Show Deployment Details



To give you more space when editing an App Object Set, the Deployment Details can be hidden. When ready with editing, simply select 'Deployment Details' check box to show.

3 Create, Edit, Deploy



The Basic steps for an App Object Set is

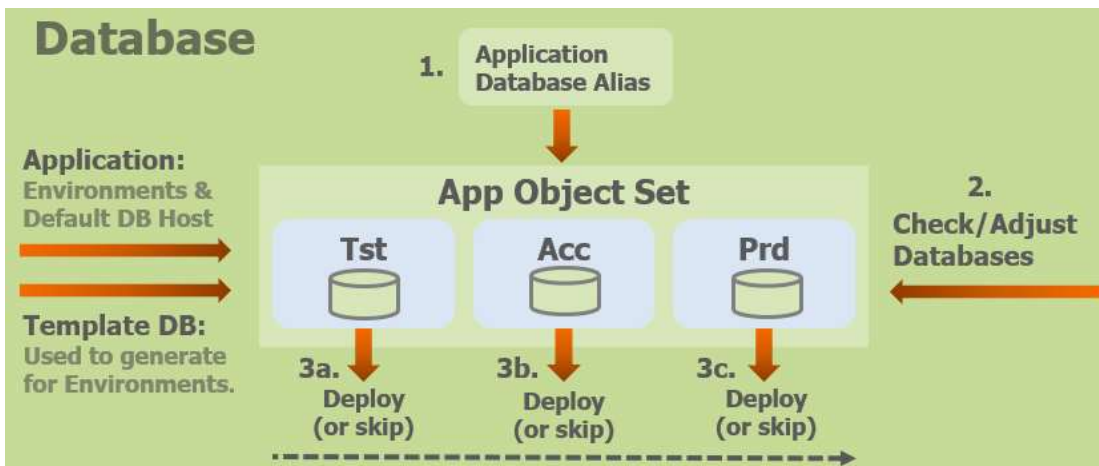
1. Create Set
2. Check / Edit (all environments)
3. Deploy (or Skip) all environments

In the sections below these steps will be described for all possible combinations. Each section closes with screen prints from the QGrip-UI.

4 Create Database

Pre-request

- **Template Database**
- **Application**
 - Environments & Default DB Host
 - Database Alias
- **Backup Schedule set for Default DB Host**



1. Create Set for Application/Database Alias
2. Check/Adjust Databases (all env.)
3. Deploy (or Skip) all environments

4.1 QGrip-UI: Create Databases

The screenshot shows a dialog box titled 'New AppObject Set Selection'. It contains three dropdown menus: 'MyApps' (checked, with 'Portia' selected), 'Set Action' (with 'Create' selected), and 'Object Type' (with 'Database' selected). At the bottom, there are 'OK' and 'Cancel' buttons.

Select Application, Create, Database.

Template Databases						
	Template	NamingConvention	Environments	DatabaseOwner	Collation	DatabaseOptions
▶	Small	{AppKey}_{E}_{DatabaseAlias}	Tst, Acc, Prd	[sa]=SUSER_NAME(1)	[Instance Default]	AUTO_UPDATE_STATISTICS, AUTO_CREATE_STATISTICS
	Small-<Replace1>	{AppKey}_{E}_{<Replace1>}	Tst, Acc, Prd	[sa]=SUSER_NAME(1)	[Instance Default]	AUTO_UPDATE_STATISTICS, AUTO_CREATE_STATISTICS
	Small-NoAlias	{AppKey}_{E}	Tst, Acc, Prd	[sa]=SUSER_NAME(1)	[Instance Default]	AUTO_UPDATE_STATISTICS, AUTO_CREATE_STATISTICS

Add	Environment	Aliases
	*-All	*-All ←
	Test	Core
	Acceptance	Root
	Production	Staging

From the Template Small, Add for All environments, for All Aliases.

Databases					
	Template	DBAlias	Environments	Collation	DatabaseOptions
▶	Small (1)	Core	Tst, Acc, Prd	[Instance Default]	AUTO_UPDATE_STATISTICS, AUTO_CREATE_STATISTICS
	Small (1)	Root	Tst, Acc, Prd	[Instance Default]	AUTO_UPDATE_STATISTICS, AUTO_CREATE_STATISTICS
	Small (1)	Staging	Tst, Acc, Prd	[Instance Default]	AUTO_UPDATE_STATISTICS, AUTO_CREATE_STATISTICS

For each Database Alias, a Database record has been created for Tst, Acc and Prd.

Test							
	Template	Database	DBAlias	Owner	Recovery	Data	Log
▶	Small (1)	Portia_T_Core	Core	[sa]=SUSER_NAME(1)	Simple	10MB/10MB/1.000MB	10MB/10MB/1.000MB
	Small (1)	Portia_T_Root	Root	[sa]=SUSER_NAME(1)	Simple	10MB/10MB/1.000MB	10MB/10MB/1.000MB
	Small (1)	Portia_T_Staging	Staging	[sa]=SUSER_NAME(1)	Simple	10MB/10MB/1.000MB	10MB/10MB/1.000MB

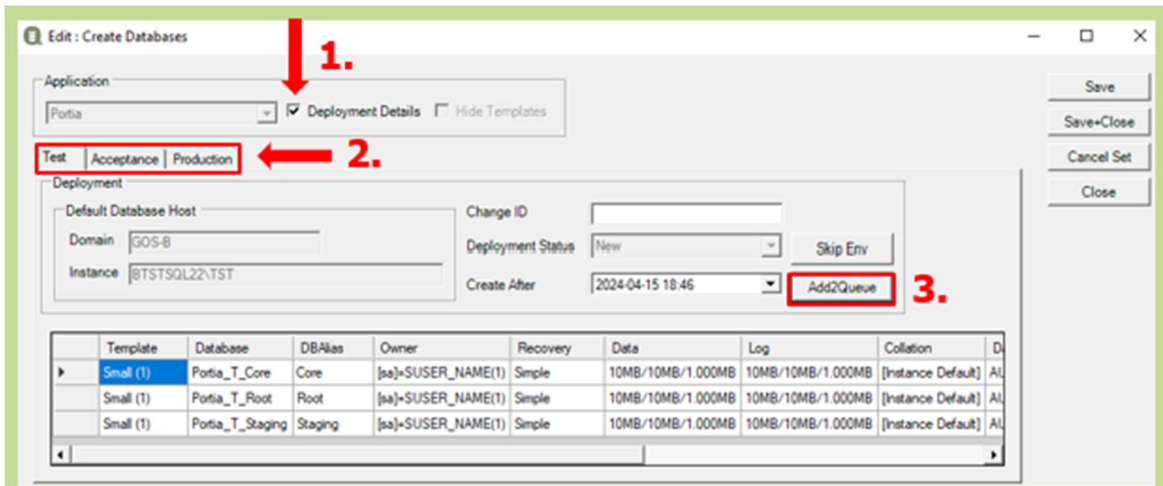
In Test, 3 databases will be created.

Acceptance							
	Template	Database	DBAlias	Owner	Recovery	Data	Log
▶	Small (1)	Portia_A_Core	Core	[sa]=SUSER_NAME(1)	Full	100MB/100MB/10.000MB	100MB/100MB/10.000MB
	Small (1)	Portia_A_Root	Root	[sa]=SUSER_NAME(1)	Full	100MB/100MB/10.000MB	100MB/100MB/10.000MB
	Small (1)	Portia_A_Staging	Staging	[sa]=SUSER_NAME(1)	Full	100MB/100MB/10.000MB	100MB/100MB/10.000MB

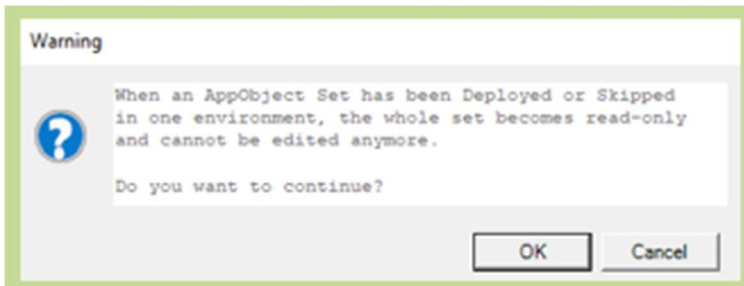
In Acceptance, 3 databases will be created.

Production							
	Template	Database	DBAlias	Owner	Recovery	Data	Log
▶	Small (1)	Portia_P_Core	Core	[sa]=SUSER_NAME(1)	Full	100MB/1.000MB/10.000MB	100MB/1.000MB/10.000MB
	Small (1)	Portia_P_Root	Root	[sa]=SUSER_NAME(1)	Full	100MB/1.000MB/10.000MB	100MB/1.000MB/10.000MB
	Small (1)	Portia_P_Staging	Staging	[sa]=SUSER_NAME(1)	Full	100MB/1.000MB/10.000MB	100MB/1.000MB/10.000MB

In Production, 3 databases will be created.



1. Check the Deployment Details to enable rollout.
2. For each DTAP Environment
3. Add2Queue



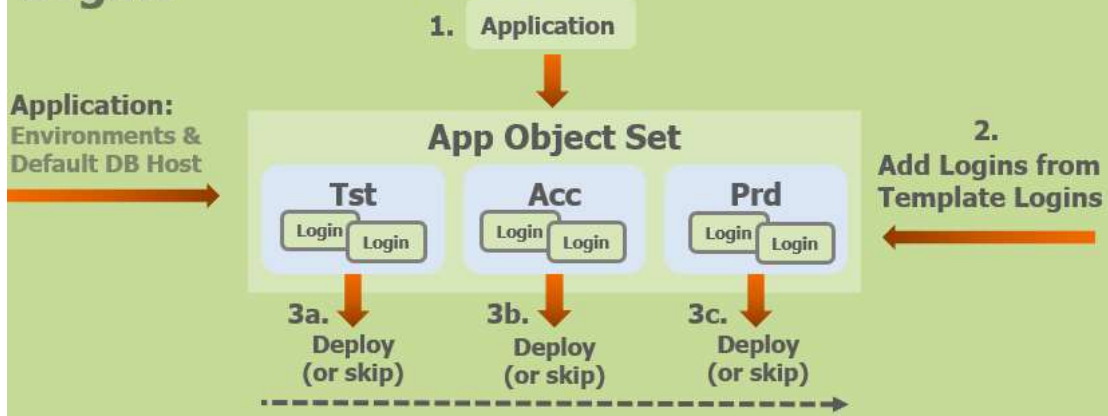
When pushing Add2Queue in the first environment a warning is issued.

5 Create Logins

Pre-request

- **Template Logins**
- **Application**
 - **Environments & Default DB Host**
 - **Databases Created**

Logins



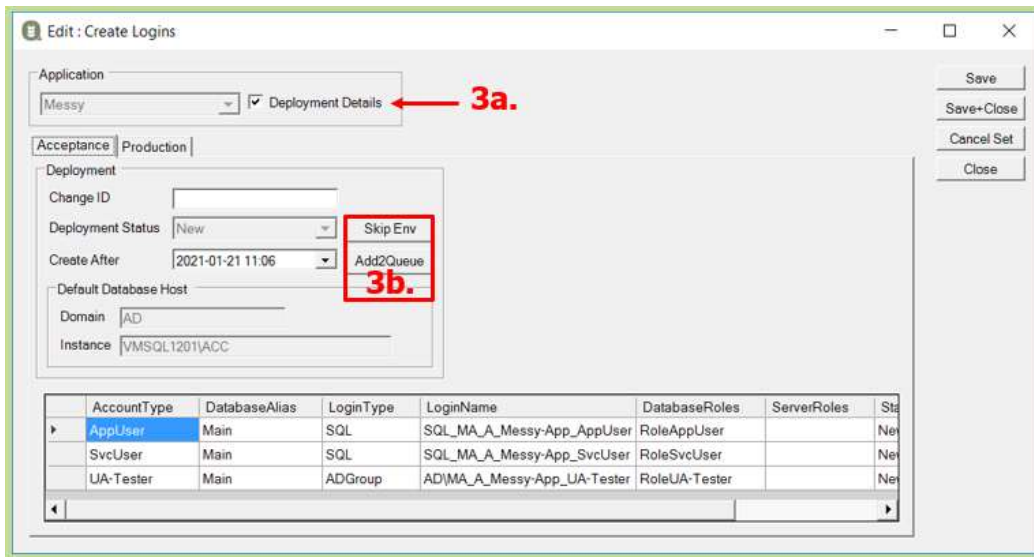
1. Create Set for Application
2. Add Logins from Template Logins (all env.)
3. Deploy (or Skip) all environments

5.1 QGrip-UI: Create Logins

1. Create a new set for the Application.

AccountType	SQL	ADUser	ADGroup	DefaultDB	Environments	DatabaseRoles
AppUser	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	tempdb	A,P	RoleAppUser
SvcUser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		A,P	RoleSvcUser
UA-Tester	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		A	RoleUA-Tester

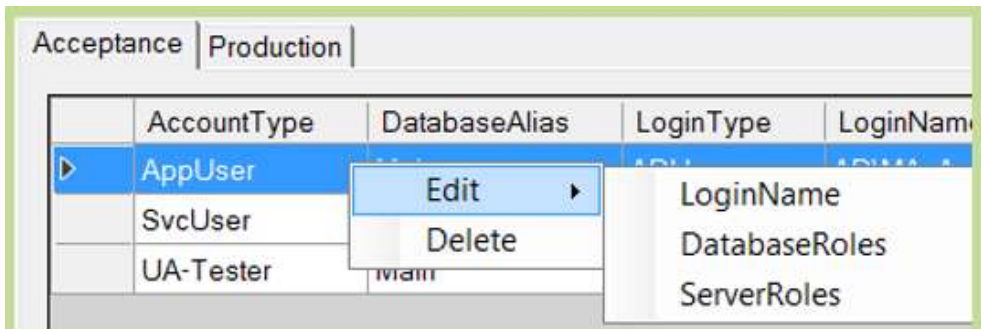
2. Add the Logins from Template Logins by select from Context menu.



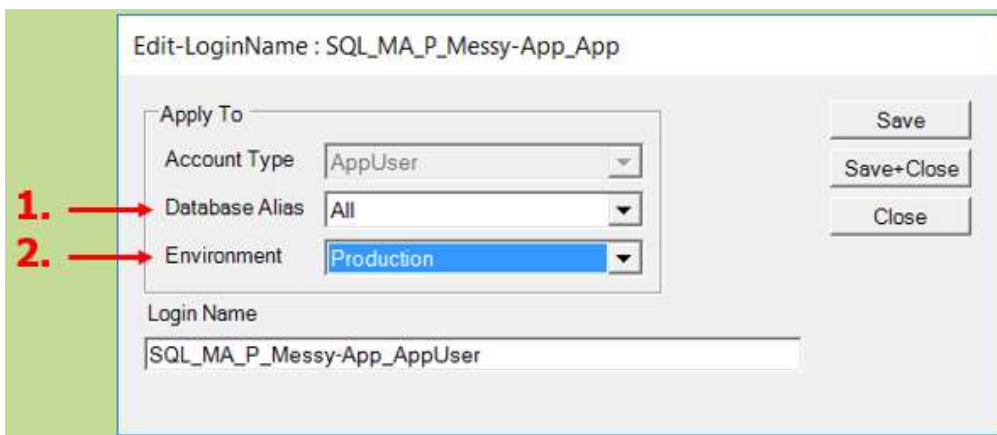
- 3a. Check to show Deployment Details.
- 3b. Deploy (or Skip) in all environments.

Deployment or skip in the first environment, will make the complete set read-only and changes will no longer be possible.

5.2 QGrip-UI: Edit Logins

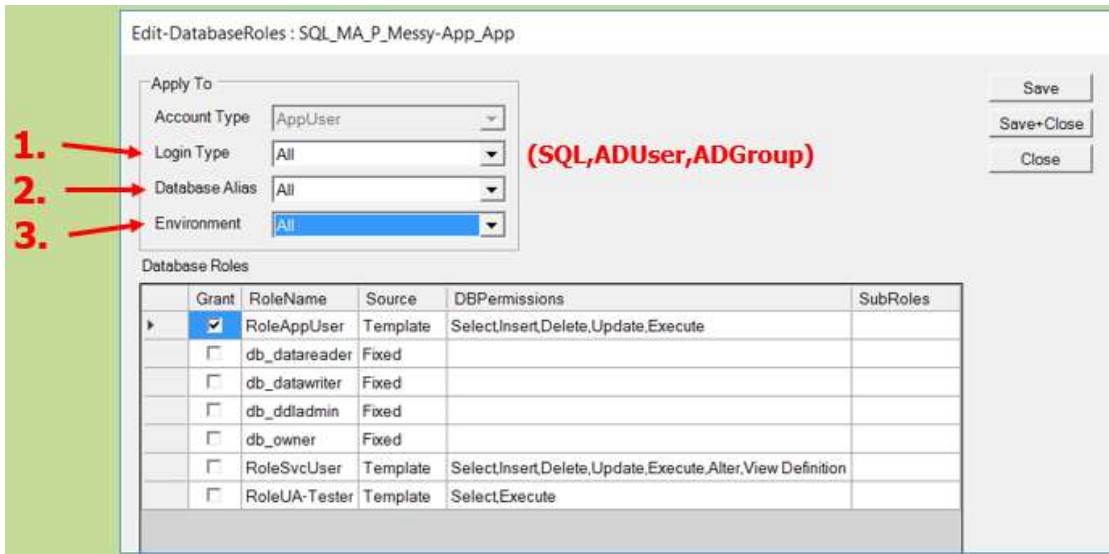


It is possible (but not recommended) to Edit the logins and overrule the templates. Changes are applied to (selection of) Logins with the same account type (template).



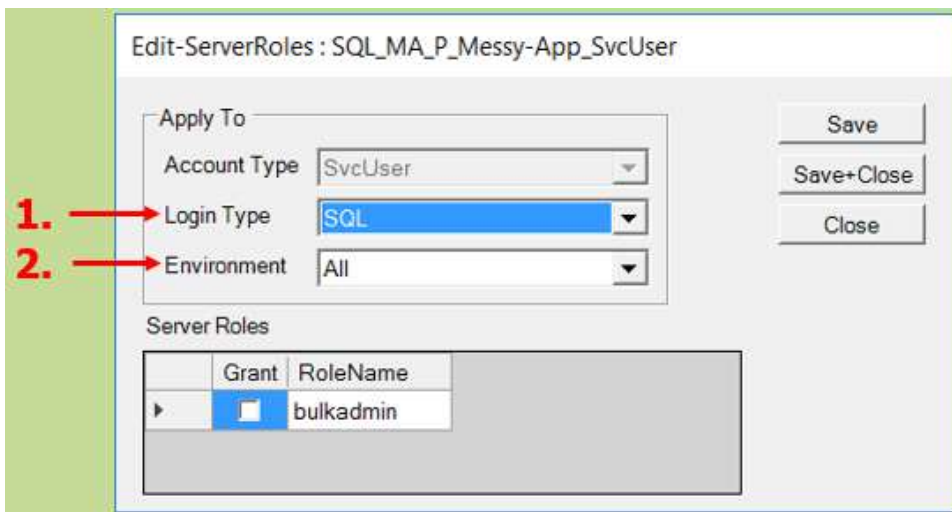
Edit Login Name and Apply to:

1. All or Specific Database Alias
2. Specific or All Environments. 'All' will result in same login name in all environments.



Edit Database Roles (select/deselect grant) and Apply to:

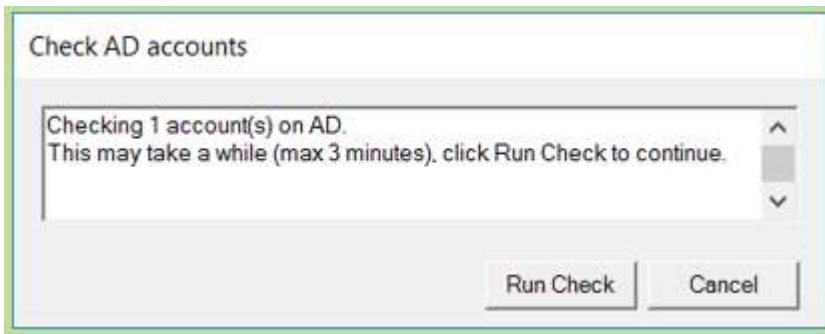
1. All or Specific Login Type
2. All or Specific Database Alias
3. All or Specific Environment



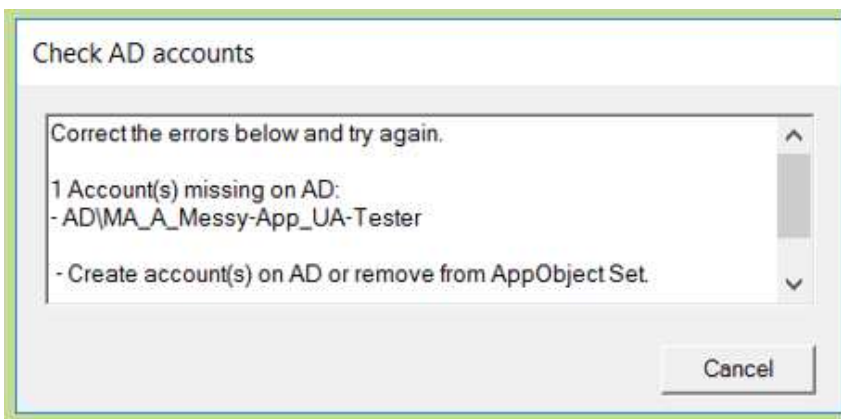
Edit Server Roles (select/deselect grant) and Apply to:

1. All or Specific Login Type (SQL, ADUser, ADGroup)
2. All or Specific Environment

5.3 QGrip-UI: Check on AD



If an App Object Set for creating Logins, contains one or more AD-accounts (ADUser/ADGroup), QGrip will check that the accounts exist on the AD. This is only done during the Deploy (or Skip) of the first environment, before the set is locked for changes. This check is done thru a job on a queue that will be executed by a QGrip Server, and might take a few moments.



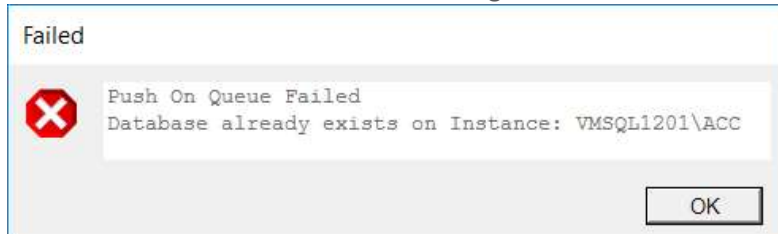
If the check fails, deploy is not possible before the error has been corrected.

6 Create: What if Exists

How does QGrip handle create App Objects situations where an App Object already exists?

Database Exists

Push on Queue fails with an error message.



Login Exists

No action or error message, logfile will contain message that login already exists.

Database User Exists

Database User SID will be synchronised with Login SID.

If App Object Set contains membership new Database Role for the Database User, the User will be added as member. Existing Role membership remains intact.

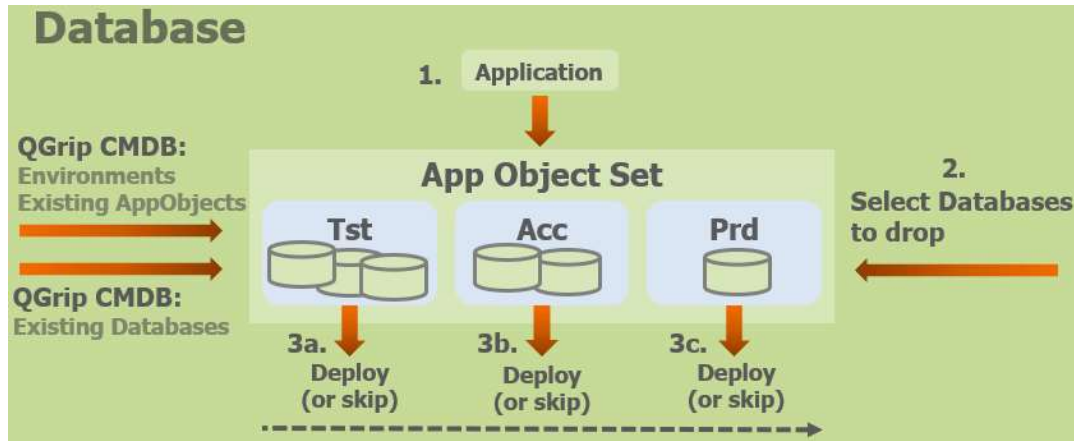
Database Role Exists

If a Database Role already exists in the database, the permissions in the database will be revoked and the permissions from the Template will be added.

7 Drop Database

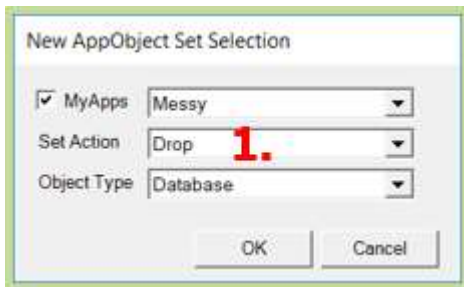
Pre-request

- **CMDB up-to-date**

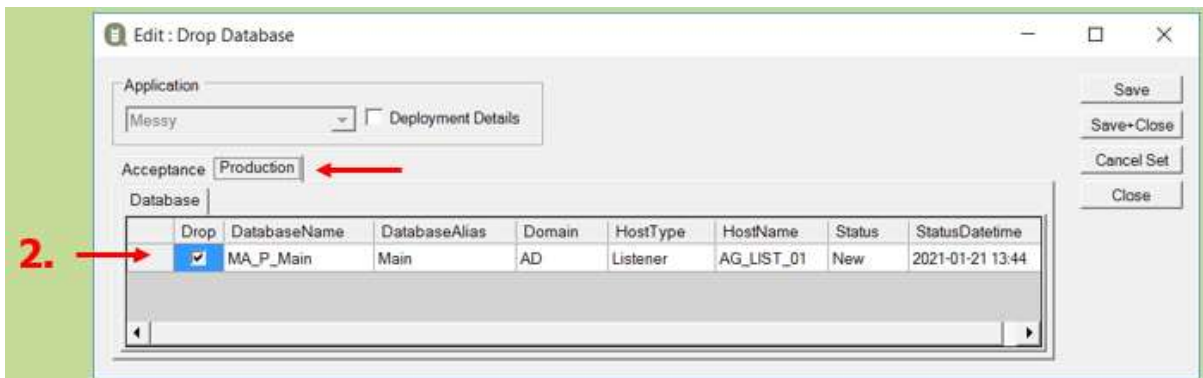


1. Create Set for Application
2. Select Databases to drop (all env.)
3. Deploy (or Skip) all environments

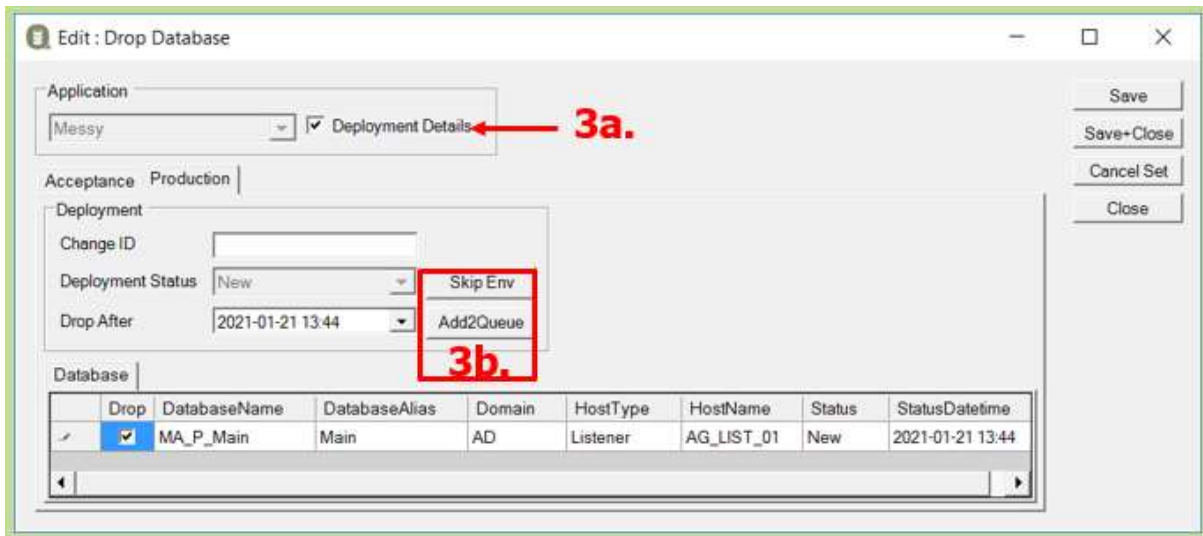
7.1 QGrip-UI: Drop Databases



1. Create a new set for the Application.



2. Select databases to drop in all environments.



3a. Check to show Deployment Details.

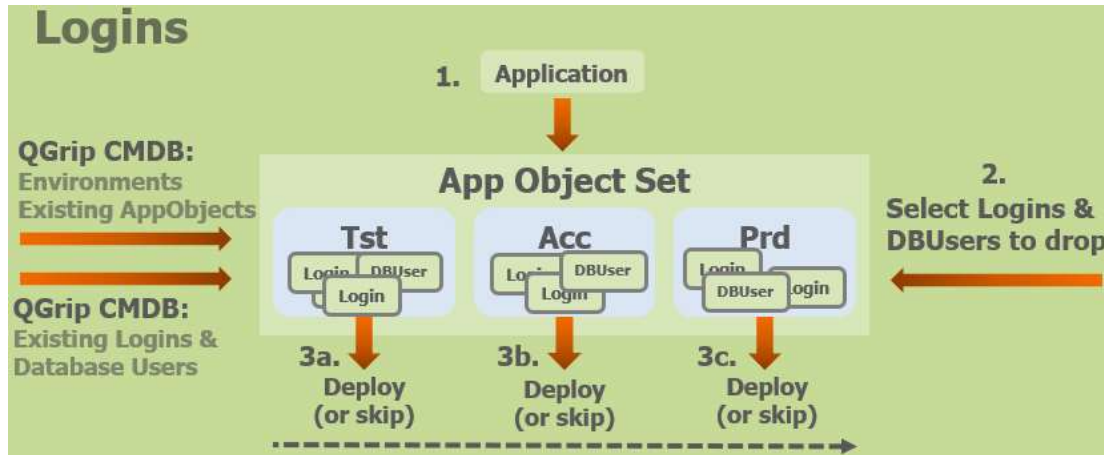
3b. Deploy (or Skip) in all environments.

Deployment or skip in the first environment, will make the complete set read-only and changes will no longer be possible.

8 Drop Logins (and/or Database Users)

Pre-request

- **CMDB up-to-date**

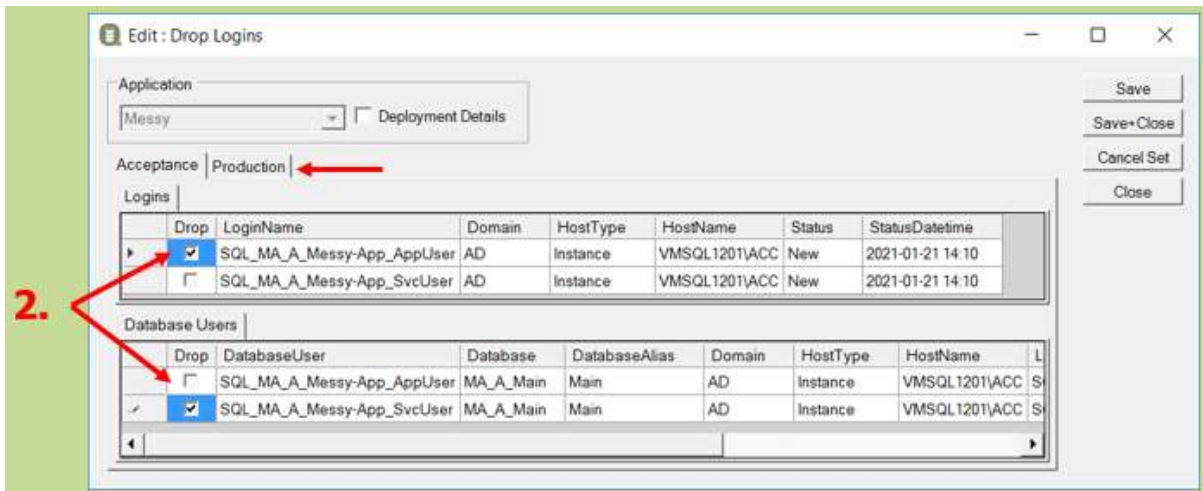


1. Create Set for Application
2. Select Logins & Database Users to drop (all env.)
3. Deploy (or Skip) all environments

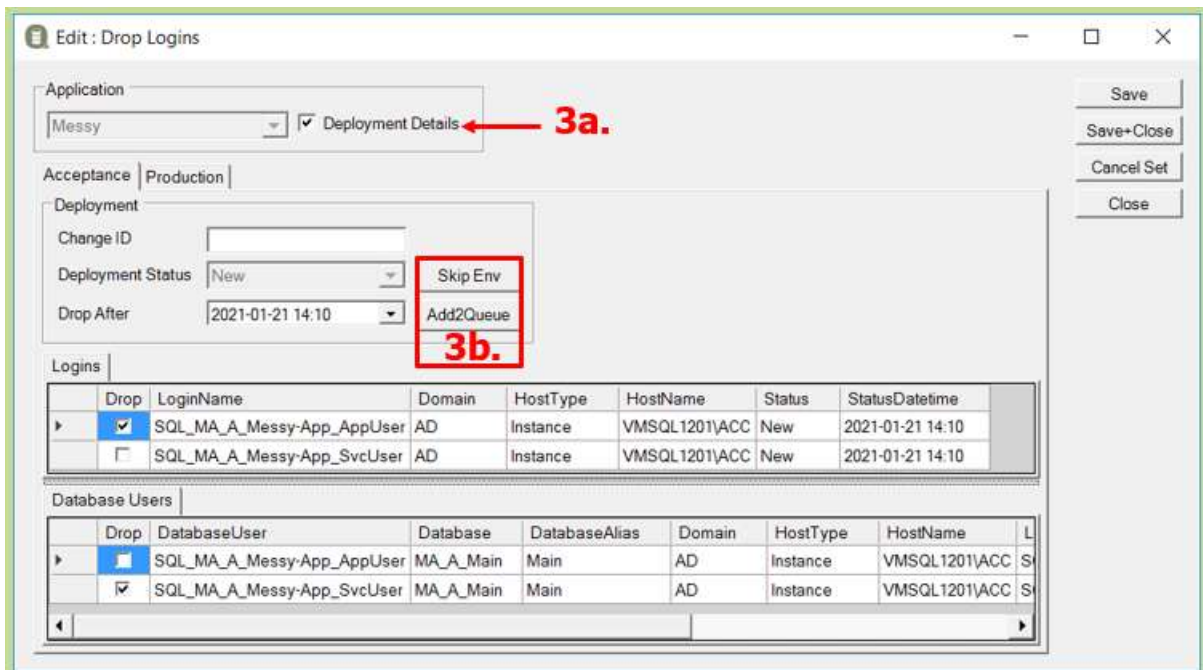
8.1 QGrip-UI: Drop Logins (and/or Database Users)



1. Create a new set for the Application.



2. Select Logins & Database Users to drop in all environments.



3a. Check to show Deployment Details.

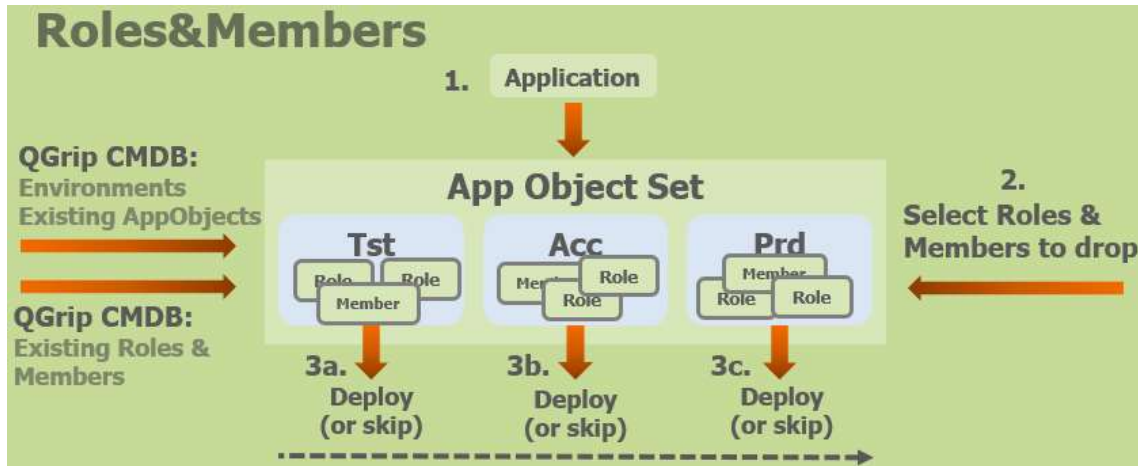
3b. Deploy (or Skip) in all environments.

Deployment or skip in the first environment, will make the complete set read-only and changes will no longer be possible.

9 Drop Roles & Members

Pre-request

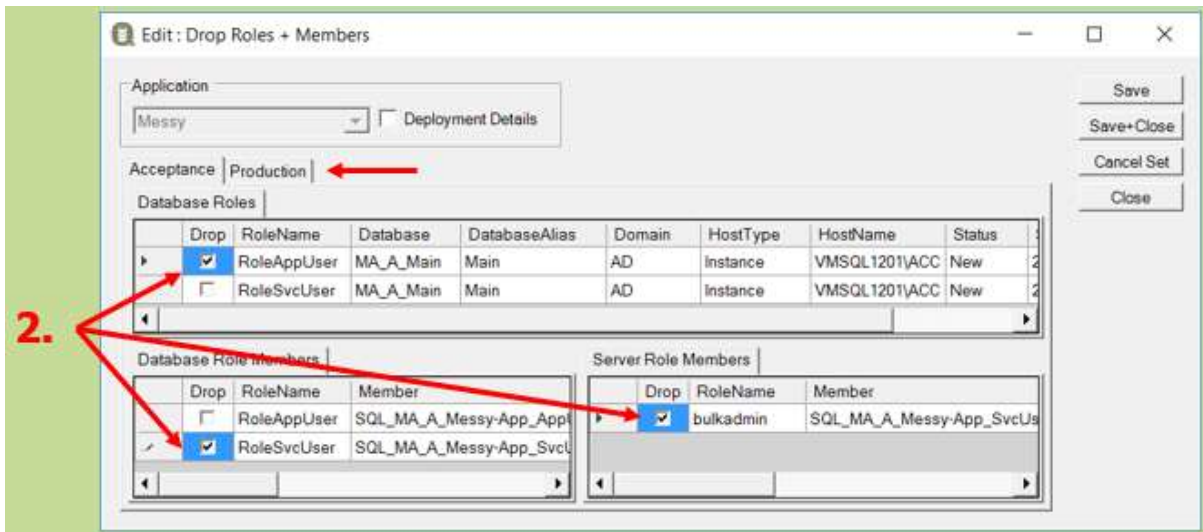
- **CMDB up-to-date**



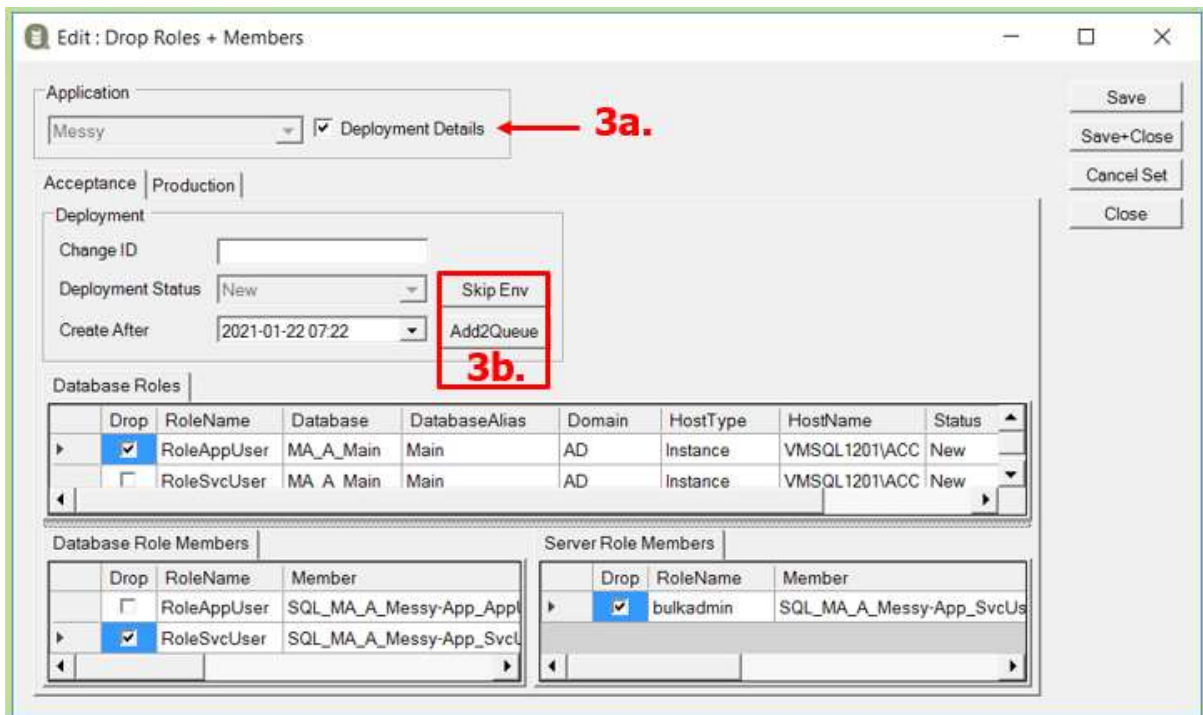
- 1. Create Set for Application**
- 2. Select Roles & Members to drop (all env.)**
- 3. Deploy (or Skip) all environments**

9.1 QGrip-UI: Drop Roles & Members

1. Create a new set for the Application.



2. Select Database Roles, Database Role Members & Server Role Member all environments.



3a. Check to show Deployment Details.

3b. Deploy (or Skip) in all environments.

Deployment or skip in the first environment, will make the complete set read-only and changes will no longer be possible.